WHAT IS CLAIMED IS:

1. A method for bonding conductive structures comprising:

compressing a thin layer of metal between one end of a conductive post and a conducting structure;

transforming the thin layer of metal into a bonding layer having a melting temperature higher than the melting temperature of the thin layer of metal; and

bonding the conductive post and the conducting structure together via the bonding layer.

2. The method of Claim 1 further comprising:

depositing a dielectric material around the conductive post.

3. The method of Claim 1 wherein the thin layer of metal comprises a material selected from the group consisting of In, Sn/Pb eutectic solder, Sn, Bi, and mixtures thereof.

4. An electrically conductive article comprising:

a conductive post;

a conductive structure; and

a thin bonding layer having a bonding-layer melting temperature and disposed between the conductive structure and the conductive post and having been formed from a bonding layer precursor having a precursor melting temperature substantially lower than the bonding-layer melting temperature.

5. A method for producing an assembly of substrates comprising:

disposing a thin layer of metal on a conducting structure coupled to a first substantially planar substrate;

dispensing a liquid polymeric material between the conducting structure and a second substantially planar substrate supporting a conductive post, the liquid polymeric material being disposed inwardly from the edges of the first and the second substrate;

pressing the liquid polymeric material between the first and the second substrates so that the liquid polymeric material flows towards the edges of the first substrate and the second substrate;

compressing the thin layer of metal between an end of the conductive post and the conducting structure;

transforming the thin layer of metal into a bonding layer having a melting temperature higher than the melting temperature of the thin layer of metal; and

bonding the conductive post and the conducting structure together via the bonding layer.

6. The method of Claim 5 additionally comprising curing the liquid polymeric material.

7. The method of Claim 6 wherein said liquid polymeric material comprises a polymer fluxing agent.

8. The method of Claim 5 wherein said liquid polymeric material comprises a polymer fluxing agent.

9. The method of Claim 6 wherein said polymer fluxing agent comprises a beta phenylacid and/or a beta phenylhydroxyacid.

10. The method of Claim 8 wherein said polymer fluxing agent comprises a beta phenylacid and/or a beta phenylhydroxyacid.

11. The method of Claim 9 wherein said beta phenylacid is selected from the group consisting of beta phenylacetic acid, beta phenylacrylic acid, beta phenylcrotonic acid, and mixtures thereof.

12. The method of Claim 10 wherein said beta phenylacid is selected from the group consisting of beta phenylacetic acid, beta phenylacrylic acid, beta phenylcrotonic acid, and mixtures thereof.

13. The method of Claim 9 wherein said beta phenylacid comprises beta phenylacrylic acid and said beta phenylhydroxyacid comprises beta phenylhydroxyacrylic acid.

14. The method of Claim 10 wherein said beta phenylacid comprises beta phenylacrylic acid and said beta phenylhydroxyacid comprises beta phenylhydroxyacrylic acid.

15. The method of Claim 5 wherein said liquid polymeric material comprises from about 15% by weight to about 70% by weight of a polymeric resin, from about 15% by weight to about 70% by weight of a curing agent, and from about 0.10% by weight to about 20% by weight of a fluxing agent.

16. A method for producing an assembly of substrates comprising:

disposing a thin layer of metal on an end of a conductive post attached to a first substantially planar substrate;

dispensing a liquid polymeric material between a conducting structure on a second substantially planar substrate and the first substantially planar substrate, the liquid polymeric material being disposed inwardly from the edges of the first and the second substrates;

pressing the liquid polymeric material between the first and the second substrates so that the liquid polymeric material flows towards the edges of the first substrate and the second substrate;

compressing the thin layer of metal between the end of the conductive post and the conducting structure;

transforming the thin layer of metal into a bonding layer having a melting temperature higher than the melting temperature of the thin layer of metal; and

bonding the conductive post and the conducting structure together via the bonding layer.

17. The method of Claim 16 additionally comprising curing the liquid polymeric material.

18. The method of Claim 16 wherein said liquid polymeric material comprises a polymer fluxing agent.